## Please amend the claims as follows:

## 1-50. (canceled)

## Please add the following set of claims:

- 1. A reflecting micro-optical component comprising a microlens operative to couple light between first and second micro-optical components through total internal reflection of the light inside the microlens.
- 2. The reflecting micro-optical component of claim 1, wherein the microlens includes a curved envelope section and at least two non-parallel flat envelope sections, and wherein the light enters the microlens through one flat section, exits the microlens through a different flat section and is reflected internally at the curved envelope section.
- 3. The reflecting micro-optical component of claim 1, wherein the microlens includes a material transparent to light of a predetermined wavelength.
- 4. The reflecting micro-optical component of claim 3, wherein the material is a photoresist.
- 5. The reflecting micro-optical component of claim 3, wherein the material is a glass.
- 6. The reflecting micro-optical component of claim 2, further comprising a thin reflecting layer covering the curved envelope section.

- 7. The reflecting micro-optical component of claim 1, wherein the reflecting layer is a metal.
- 8. The reflecting micro-optical component of claim 1, wherein the first micro-optical element and the second micro-optical element are respectively a waveguide and a photodetector.
- 9. The reflecting micro-optical component of claim 1, wherein the first micro-optical element and the second micro-optical element are respectively a light source and a waveguide.
- 10. A reflecting microlens comprising:
- a. a curved envelope section separating a light transparent material from a first external medium;
- b. a first flat envelope section separating the light transparent material from a second external medium; and
- c. a second flat envelope section positioned substantially vertical to the first flat section and separating the light transparent material from a third external medium;

whereby light entering the microlens from the second external medium is totally internally reflected from the curved envelope section into the third external medium.

- 11. The reflecting microlens of claim 10, wherein the light transparent material is selected from the group of a photoresist and a glass.
- 12. The reflecting microlens of claim 10, further comprising a thin reflecting layer covering the curved envelope section.
- 13. The reflecting microlens of claim 12, wherein the reflecting layer is a metal.
- 14. The reflecting microlens of claim 10, wherein the second external medium is a waveguiding medium and wherein the third external medium is a photodetecting medium.
- 15. The reflecting microlens of claim 12, wherein the second external medium is a light emitting medium and wherein the third external medium is a waveguiding medium.
- 16. The reflecting microlens of claim 14, integrated on a substrate that includes the photodetecting medium and supports the waveguiding medium.
- 17. The reflecting microlens of claim 16, wherein the substrate is silicon.
- 18. A method of coupling light between first and second micro-optical components, comprising the steps of:

a. forming a microlens reflector operative to reflect light from the first to the second micro-optical component by total internal reflection; and

optical component by total internal refrection, and

b. coupling light from the first to the second micro-optical component.

19. The method of claim 18, wherein the step of forming a microlens includes forming a photoresist

microlens having a curved external surface.

20. The method of claim 19, wherein the step of forming a microlens further includes forming a thin

reflecting layer over the curved external surface.

Respectfully Submitted,

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Date: March 15, 2006